

NIH Director's Pioneer Award Program

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Key Dates

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A unique aspect of the NIH Roadmap for Medical Research is the NIH Director's Pioneer Award (NDPA) Program. First announced in Fiscal Year 2004, nine awards were made in September 2004. The NDPA is designed to support individual scientists of exceptional creativity who propose pioneering approaches to major contemporary challenges in biomedical research. The term "pioneering" is used to describe highly innovative approaches that have the potential to produce an unusually high impact, and the term "award" is used to mean a grant for conducting research, rather than a reward for past achievements. Biomedical research is defined broadly in this announcement as encompassing scientific investigations in the biological, behavioral, clinical, social, physical, chemical, computational, engineering, and mathematical sciences. The NDPA is meant to support individuals who intend to pursue new research directions that are not already supported by other mechanisms. The program is not intended simply to expand the funding of persons already well supported for a particular project.

This notice announces a second NPDA competition for approximately 5-10 new awards of up to \$500,000 direct costs per year for five years that will be made in Fiscal Year 2005. Awardees are expected to commit the major portion (at least 51%) of their research effort to activities supported by the NDPA.

Background

The NIH's success depends on the creativity of investigator-initiated research, much of it supported by the R01 grant mechanism. Many scientists who participated in the development of the NIH Roadmap, however, expressed the view that additional means might be necessary to identify scientists with ideas that have the potential for high impact, but may be too novel, span too diverse a range of disciplines, or be at a stage too early to fare well in the traditional peer review process. A group of distinguished outside consultants proposed that NIH implement a completely new program to encourage highly innovative biomedical research with the great potential to lead to significant advances in human health. This program would complement NIH's traditional, investigator-initiated grant programs. Unlike most NIH grant mechanisms, the NDPA is designed not to support projects but rather to support highly creative and pioneering people.

Eligibility

Investigators eligible for the NDPA must be U.S. citizens, non-citizen nationals, or permanent residents who are currently engaged in research. The research proposed need not be in a conventional biomedical or behavioral discipline; if the individual's experience is in non-biological areas, however, he/she must demonstrate an interest in exploring topics of biomedical relevance. If selected, individuals must show evidence of institutional infrastructure support. Nominees and applicants who were not selected for an award in 2004 may submit self-nominations this year. Investigators at all career levels are eligible. Those at early to middle stages of their careers, and women and members of groups underrepresented in biomedical research are especially encouraged to nominate themselves.

Application Process

The application process consists of two stages, as detailed below. Individuals must first nominate themselves. Investigators whose nominations are considered to be the most competitive will be invited to submit supplemental information, which together with the nomination, will constitute the full application.

The nomination package must include the following information:

- The general category or categories of research the investigator will address (select one or more: Behavioral

and Social Science; Clinical Research; Instrumentation and Engineering; Molecular and Cellular Biology; Pathogenesis and Epidemiology; Physiological and Integrative Systems; Quantitative and Mathematical Biology; or Other, and specify a category if none of the categories above is appropriate). Category selection will assist staff in assigning nominations to evaluators.

- An essay of 3-5 pages that addresses the investigator's innovative vision for, and the significance of, the biomedical problem to be addressed, and his/her qualifications to engage in groundbreaking research. The essay should describe the individual's view of the major challenges in biomedical research to which he/she can make seminal contributions. No detailed scientific plan should be provided since the research plan is expected to evolve during the tenure of the grant. As part of the essay, individuals should include answers to all of the following questions:
 - What is the scientific problem that will be addressed, and why is this important?
 - What are the pioneering, and possibly high-risk, approaches that, if successful, might lead to groundbreaking or paradigm-shifting results?
 - What concrete evidence can the individual provide for his or her claim of innovativeness? For example, qualities common to many highly innovative people include an interest in, and the ability to integrate, diverse sources of information; an inclination to challenge paradigms and take intellectual risks; persistence in the face of failure; an ability to attract the right collaborators; and the energy and concentration necessary to plan and execute effective strategies for accomplishing goals.
 - How will the new research direction differ from the individual's past or current work?
 - Why is the planned research uniquely suited to the stated goal of the NDPA program?
 - A 2-page biographical sketch
 - A list of current research support from all sources with a brief description of each supported project
 - The names and complete contact information (including an e-mail address) for three referees from whom the individual will request letters of support if he/she is selected to proceed to Phase 2 of the selection process
 - An optional form including personal data to assist NIH in a prospective analysis of the NDPA program.

The nomination form can be found at <http://nihroadmap.nih.gov/pioneer>. Nominations must be submitted electronically, as described on the form. The website will accept nominations from March 1, 2005 through 5 P.M. EST, April 1, 2005.

Selection Process

All nominations will be evaluated in Phase 1, first by NIH staff for eligibility and then by a multidisciplinary group of outside experts, to identify those that are most highly competitive. Beginning in mid-June, individuals will be notified whether or not they have been selected to proceed to Phase 2. An individual selected to proceed to Phase 2 must submit a copy of his/her most significant publication or achievement and arrange for direct submission to NIH of letters of support from the three references whose names were provided in the initial nomination package. Instructions for submitting the information required for Phase 2 will be provided. Please refer to the Pioneer Award website (<http://nihroadmap.nih.gov/pioneer>) for the required format for the reference letters.

In Phase 2, a distinguished group of outside experts will evaluate all of the submitted information and recommend a subset of candidates who will be invited to NIH for interviews. These candidates will be interviewed in August-September 2005 by a panel of distinguished outside experts. The final level of review will be conducted by the Advisory Committee to the Director, NIH, which will make recommendations to the Director, NIH, based on the evaluations by outside experts and programmatic considerations. Final selections will be announced, and awards made, by the end of September 2005.

Evaluation Criteria

Phase 1: Nominations will be evaluated based on the likelihood that the individual will pursue a pioneering approach to a problem of relevance to biomedical research, the absence of alternative funding to pursue this direction; and compelling justification for the advantage of evaluation by the NPDA process rather than the standard peer review process.

Phase 2: The essay, the letters of reference, and the example of the applicant's most important scientific contribution

will be evaluated for evidence of:

- Innovation/creativity, and the potential for future innovation. Evaluators will assess "innovation density" -- the extent of innovative activities relative to the applicant's career stage.
- Motivation/enthusiasm/intellectual energy to pursue a challenging problem.
- Relevance of the research and impact on the scientific field and on the NIH mission.

Awards

Sufficient funds have been set aside in 2005 to provide 5-10 awards. The awards will be for up to \$500,000 direct costs each year, for five years. Although there are no stipulations on the research agenda, awardees will be required to submit a report on June 1 of each year describing the activities conducted during the year through the NPDA, to submit a final progress report at the end of the grant period, and to participate in an annual symposium on the NIH campus. This symposium will allow awardees to share their ideas, progress, and experience with each other, the research community, and NIH staff.

Special Requirement

Individuals who nominate themselves should be aware that they may be contacted at a later time to provide NIH with a limited amount of follow-up information. Because the NDPA is a pilot program, NIH believes that contacting participants is important for evaluating the NDPA program and its outcomes.

Inquiries

The NIH Director's Pioneer Award is among several initiatives being undertaken as a part of the NIH Roadmap. To learn more about the NIH Roadmap see the NIH Roadmap Website at <http://nihroadmap.nih.gov/>. For more information about the NPDA, see Frequently Asked Questions at <http://nihroadmap.nih.gov/pioneer>, or e-mail your questions to pioneer@nih.gov.

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